



Innovation Strategy

HELSINKI METROPOLITAN AREA



KEY FACTS FOR THE HELSINKI REGION

Population: The Helsinki Region 1,240,482 (2005)

Number of enterprises: 61,479 (2003)

Enterprises in Finland: 229,005

Number of research personnel (2003):

Total for Helsinki Region: 31,491

Researchers in enterprises: 15,934

Researchers in the public sector: 6,759

Researchers in universities and polytechnics: 8,798

Number of universities: 8

Number of polytechnics: 8

Student enrolments (2004): **at universities: 63,671**

at polytechnics (2003): **28,918**

University students in Finland: 174,047

Polytechnic students in Finland: 129,218

University graduates of the population (2003)

In the Helsinki Region 32,3 %

In Finland 24,6 %

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1.

Innovation Strategy

COLLABORATION: THE ONLY FEASIBLE WAY FORWARD FOR THE HELSINKI METROPOLITAN AREA

To succeed in a competitive world Finland and the Helsinki Metropolitan Area must be able to create new innovations and exploit them more effectively. The first innovation strategy for the Helsinki Region shows the way forward for collaboration that will more efficiently harness the huge innovation potential of the metropolitan area.

Regionally, nationally and internationally there is a pressing need for collaboration to generate added value. The future competitive strength of the Helsinki Region and its appeal as a strategic partner for the world's other leading knowledge hubs will depend on the Region's record of effective collaboration.

THE HELSINKI REGION WILL DETERMINE THE COMPETITIVENESS OF THE WHOLE OF FINLAND

The public policy of developing Finland's other regions has diverted too much attention away from the Helsinki Region in recent years. Revenue transfers and the continuing debate on relocating various public functions away from the Finnish capital indicate that the Helsinki Metropolitan Area has not been the focus of national policymaking.

Radical new partnerships, not least between the Helsinki Metropolitan Area and the State, will be needed to restore the leading national and international status of the Helsinki Region. National innovation policy must acknowledge the principle that the future competitiveness of Finland can be based only on pre-eminence, specialisation and reinforcement of strengths. As the leading national expertise cluster, the Helsinki Region remains the strategic core of Finland's international competitiveness.

A four-pillar strategy:

- I. Improving the international appeal of research and expertise*
- II. Reinforcing knowledge-based clusters and creating common development platforms*
- III. Reform and innovations in public services*
- IV. Support for innovative activities*

2.

Background to the strategic work

The Helsinki Metropolitan Area comprises four cities (Helsinki, Espoo, Vantaa and Kauniainen) with a total of approximately one million residents, nine universities, eight polytechnics, numerous research institutes and a large number of diverse regional and national intermediate and agency organisations involved in innovative activities. Businesses play an important role in commercialising innovations and in applied research and product development. The population of the Helsinki Region is educated to a very high standard.

The European Competitiveness Index 2004 rates the Uusimaa Province as the European leader in competitiveness and creativity. Creativity was measured in terms of investment in research, development and education, patent registration and people working in IT services. Despite its high ratings in many recent assessments of competitiveness, the Helsinki Region remains a medium-range generator of wealth by the standards of European regions. It may well be asked why so little added value has emerged from such an excellent platform.

While the Helsinki Region has also made substantial basic investments in its innovation system, the processes of innovation still require fine-tuning. This calls for new collaboration and social innovation. Individual research teams, enterprises or cities are in-

capable of managing all of the elements necessary for success in an increasingly complex world, and so social capital and networking grow ever more important. The Helsinki Region still has considerable scope for improvement in respect of social capital and the management and use of networks.

2.1. SUBSTANTIAL ADDED VALUE FROM COLLABORATION

The most widely recognised strengths of the Finnish innovation system lie in advanced collaboration between the private and public sectors. Good experiences of collaboration between the universities and private enterprises have also been secured in the Helsinki Region. On the other hand, there has been much less collaboration between public sector participants in the Helsinki Metropolitan Area. This is equally true of local authorities in the Region and of its universities and polytechnics. The lack of collaboration is often explained as a consequence of the large number of participants in the Region. This excuse does not serve the aim of improving the Region's competitiveness. A joint vision approved by the Helsinki Metropolitan Area Advisory Board in autumn 2004 favours the evolution of the Area into an entity that functions in an integrated manner.



The vision for Helsinki Region

The Helsinki Metropolitan Area is a dynamic world-class centre for business and innovation. Its high-quality services, arts and science, creativity and adaptability promote the prosperity of its citizens and bring benefits to all of Finland. The Metropolitan Area is being developed as a unified region close to nature where it is good to live, learn, work and do business.

*Helsinki Metropolitan Area Advisory Board,
16 November 2004*



“Collaboration within the Helsinki Region will bring considerable added value to all of the cities of the Region.”

*Eva-Riitta Siitonen, Lord Mayor,
City of Helsinki*

The principal challenges of implementing an innovation strategy lie in establishing specific forms for new collaboration in the public sector. The cities of the Helsinki Metropolitan Area have recently demonstrated their ability to work together when seeking common points of improvement for reforming public services and initiating work to formulate a common business development policy. It is important to ensure the success conditions for these ongoing common efforts. Permanent relaxation of the boundaries between local authorities, universities and polytechnics within the Helsinki Region will be essential for competitiveness and success.

Example: Region marketing

International marketing of the Helsinki Region is a concrete example of an activity that cannot be managed in practice to a high standard without a common vision and purpose. The Region will not gain a reputation as a world class centre for business and innovation without marketing, which in turn will require competent commercialisation of the Region's strengths. Simply “being quite good” will not be enough to attract foreign experts, capital and enterprises. It is also necessary to be able to express this fact. We are still years behind our strongest competitors in commercialising and marketing the strengths of the Region.

2.2. FORMULATING THE STRATEGY

The idea of a common innovation strategy for the Helsinki Metropolitan Area emerged in the course of work done in spring 2003 by the second Helsinki Club of leading policymakers convened by Lord Mayor Eva-Riitta Siitonen. The Club envisaged an innovation strategy for Helsinki Region in order to reinforce collaboration between various social participants in the Region. Educational and research organisations, the cities of the Region, national innovation organisations and local enterprises would play a key role in this collaboration.

The process of formulating the innovation strategy was financed by the National Technology Agency of Finland – Tekes and by the local authorities of Helsinki, Espoo and Vantaa. It was implemented by the Uusimaa development company Culminatum Ltd, which took the formal decision to launch the project in August 2003 and hired a full-time project director at the beginning of 2004. Culminatum then invited a steering group to guide the project. This steering group comprised the Board of Directors of Culminatum, together with five outside experts: Director Antti Hautamäki of the Finnish National Fund for Research

and Development – SITRA, Vice President Erkki Ormala of Nokia Plc, Director Hannu Paju of Uusimaa Employment and Economic Development Centre, Chancellor Kari Raivio of the University of Helsinki and Director-General Veli-Pekka Saarnivaara of the National Technology Agency of Finland – Tekes.

The steering group decided to initiate the work on two levels: (1) overall management, and (2) interventions in important subject areas. Teams were set up for six special subject areas involving the work of more than one hundred experts in all. It is unlikely that the work of formulating the strategy would have created significant results without the expertise and considerable investment of time by these innovation professionals. Experienced chairmen were invited to lead the six special subject teams: (1) the role of the cities, Juhani Kuusi, professor emeritus (2) development platforms, Paavo Uronen, chairman (3) seed financing, Henri Grundstén, Director (4) creative sectors, Krister Ahlström, industrial counsellor (5) the technology centre concept, Juha Kostiainen, Development Director, and (6) Helsinki Region as an international setting for education and research, Mauno Kosonen, university Vice-Rector. A strategy seminar organised in summer 2004 attracted more than 170 specialists to a debate on the principles of an innovation strategy. A grand total of more than 300 innovation participants were involved in various aspects of formulating the strategy.

An initial discussion paper on the innovation strategy was commissioned in 2003 under the title ‘Development of Helsinki Region as an innovation environment’. Professor Seija Kulkki and Dr Heli Penttinen of the Center for Knowledge and Innovation Research at Helsinki School of Economics and Business Administration interviewed more than one hundred influential people in the Helsinki Region to investigate the principal bottlenecks and future prospects of innovation activity.

3.

Improving the international appeal of research and expertise

International character is a theme that should distinguish all measures taken to enhance the innovative environment in the Helsinki Region. The Region's experts and businesses are reasonably international in their external relations, but does the Region appeal to foreign specialists and enterprises?

Finland's remote geographical location should form no insuperable obstacle to globalising the Helsinki Region from within. The general attractiveness of Finland and the Helsinki Metropolitan Area can be influenced by reforming the taxation system and provisions governing the lives of non-citizens in the country.

3.1. MORE FOREIGN DEGREE STUDENTS

The Helsinki Region provides an education and research setting of a high international standard. The main requirement for future success is to ensure that this setting also becomes international. Even though the Helsinki Metropolitan Area has become a popular destination for exchange students and was well-placed, for example, in the 2003 Student city com-

parison of nine European university cities, there are still relatively few foreign degree students and researchers working in the universities and polytechnics of the Region.

The optimal strategy for marketing educational opportunities in the Region will focus on attracting students of a high standard who will probably also be interested in remaining in Finland after they graduate. People who come to Finland from countries with lower living standards are known to be more likely to settle permanently in Finland. Furthermore, a foreigner who has completed a degree course in Finland generally has at least a tolerable command of the Finnish language, personal ties to Finnish society and a degree that is most likely to be recognised by the Finnish labour market.

■ **Action proposal 1:** The universities, polytechnics and local authorities should make joint efforts to market the Helsinki Region internationally as an integrated region for education and research.



Both quantitative and qualitative objectives will be needed to increase the proportion of foreigners in the universities and polytechnics. The Ministry of Education has set a target of doubling the number of foreign researchers and degree students by the year 2010. This may be considered an absolute minimum objective for the Helsinki Region, which is inevitably best placed to succeed in any demanding globalisation assignment.

Any genuine effort to globalise the Helsinki Region will require investment in the Region's joint marketing and in the availability of educational services in the English language. Public authorities must contribute to the additional funding required to globalise the

universities and polytechnics, as without such extra financing it will not be possible to provide a sufficiently high standard of foreign language instruction while maintaining the standard of other activities.

■ **Action proposal 2:** The universities and polytechnics should commit themselves to common globalisation objectives and principles, and should formulate the necessary plans for enhancing international student recruitment.

3.2. ENTERING A GLOBAL EDUCATION MARKET WITH LEADING PRODUCTS

Globalising the Finnish education system will require the universities and polytechnics to make choices. To thrive in a competitive education market, the Helsinki Region must offer educational services that are linked to its finest accomplishments, in other words to the sectors in which the Region is already an international leader or is otherwise highly advanced. It will be up to the universities and polytechnics to select the areas on which to focus.

One challenge in designing and marketing jointly implemented educational packages is to make those packages competitive.

■ **Action proposal 3:** The universities and polytechnics will select the educational areas that will be provided in future in the English language. Universities must collaborate in planning and implementing degree courses. The same need for collaboration also applies to the polytechnics and to the degrees that they grant.

The joint forum of university and polytechnic rectors is an important policymaking body that will play a key role in this process. Implementing parties will also be needed, however, for preparing collaboration in practice and rapidly initiating reforms. A permanent secretariat of adequate size has been set up for university collaboration in the Öresund area, for example. The universities and polytechnics should consider allocating additional resources to their collaboration in accordance with the Öresund format. On the other hand, collaboration in educational service provision could bring savings and other economies of scale for the participants.



Example: Globalisation of the forest industry cluster

Helsinki University of Technology is currently preparing an international forest industry cluster degree package to be launched in autumn 2005 with an international M.Sc. degree in wood processing technology and a further training programme at the HUT Dipoli Lifelong Learning Institute. Operations will subsequently enlarge within the forest industry cluster. The programme package has been prepared by Finnish and foreign universities in association with industry, and will be implemented largely through networked training utilising leading Finnish expertise in a global education market.

Example: Helsinki School of Creative Entrepreneurship

The Helsinki Region should more effectively benefit from the multidisciplinary character of its educational provision by establishing more educational packages across organisational and subject boundaries. Good experiences of this approach include the International Design and Business Management programme (IDPM) of Helsinki School of Economics and Business Administration, the University of Art and Design and Helsinki University of Technology: the likelihood of significant innovation increases when students and

“Helsinki Region needs an international research institute.”

Kari Raivio, Chancellor of the University of Helsinki

researchers are able to transcend the boundaries of campus and organisation. The IDBM experience provides a sound justification for progressing to the next stage, at which creativity, technology and business will come together in the joint Helsinki School of Creative Entrepreneurship project of the universities and business community.

■ **Action proposal 4:** The Helsinki School of Creative Entrepreneurship project should be launched, providing an English language degree programme and participation in multidisciplinary research projects. HSCE will provide substantial support to the participating universities in performing their third function of exerting social influence.

3.3. IMPROVING SERVICES FOR FOREIGN EXPERTS

The universities, polytechnics, research institutes and local authorities of the Helsinki Metropolitan Area must collaborate to promote the settlement of foreign students and researchers, and the availability and quality of services enabling them to thrive. Attention must also be paid to the community needs of foreigners, as an experience of estrangement may be the greatest single obstacle to naturalisation.

■ **Action proposal 5:** Foreign students and researchers should be better served in future. This may be achieved by establishing a unit to serve foreigners throughout the Region and to take charge of at least region marketing and provision of information concerning studies, housing, residence permits, social welfare, the status of family members and recruitment.

An amendment should be made to the new Aliens Act whereby foreign research students enrolled at universities and polytechnics would not be required to return to their countries of origin on graduation in order to request residence permits, but could remain in Finland to seek employment opportunities at once.

3.4. CORRECTING IMBALANCE IN CUTTING-EDGE RESEARCH

The single most important factor directing the mobility of researchers is scientific pre-eminence. Leading Finnish researchers are well represented at universities abroad. Finnish experts have also managed to persuade foreign colleagues to join their teams in Finland, even though the country loses out to many competitors in respect of earnings, climate and settlement of family members. Special measures will be needed, however, in order to procure more senior foreign leading researchers and Finnish returnees who have enjoyed success abroad.

■ **Action proposal 6:** The cities of the Helsinki Metropolitan Area must be prepared to assist in financing annual invitations to a few world-class researchers to work at the universities and research institutes of the Region in order to reinforce the international character of these centres. This will at least require special arrangements for recruitment and housing. The cities should formulate a concrete proposal on this matter that will serve to focus the interest of other potential sources of finance.

Procuring a significant international research institution in the Helsinki Region must become one objective of globalisation at home. This could be accomplished by considerably increasing investment in one of the

existing units (e.g. Helsinki Institute of Information Technology HIIT or forest cluster related research at Helsinki University of Technology + Technical Research Centre of Finland + Finnish Pulp and Paper Research Institute – KCL) or by establishing an entirely new institution (e.g. a European Molecular Biology Laboratory molecular medicine unit, the research functions of the European Union Chemicals Agency or the projected multidisciplinary CICERO educational research centre co-ordinated by the University of Helsinki). None of these options will materialise without common resolve and systematic action.

3.5. FOREIGN EXPERTS ARE ESSENTIAL IN WORKING LIFE

Finland also lags behind most other European Union Member States in the number of foreign specialists working in the country. The global movements of such experts are guided by the most promising employment opportunities, immigrant communities and an atmosphere that is tolerant and conducive to international activity. Finland and the Helsinki Region have some distance to catch up in the global race to secure the services of specialists at work.

“Finnish universities must secure more internationally pre-eminent researchers and teachers.”

Esko Aho, President of the Finnish National Fund for Research and Development – SITRA

■ **Action proposal 7:** Universities, polytechnics and businesses must jointly endeavour to support career opportunities in the Helsinki Metropolitan Area for students completing their degrees. This means considering foreigners for internships, bench training and other opportunities when these are advertised and planned.



4.

Reinforcing expertise clusters and creating common development platforms

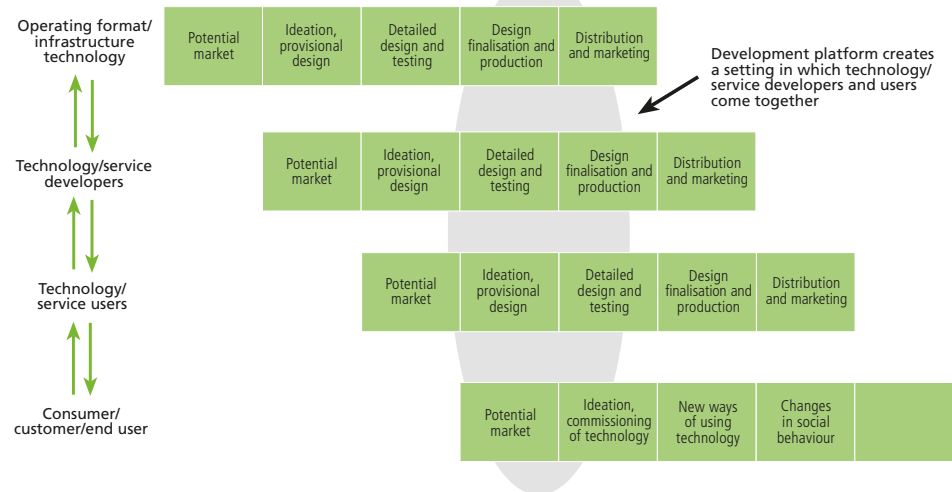
High educational standards, a firm grounding in science and technology and a long track record of co-operation between the private and public sectors have laid the foundations for developing innovative products and services in the Helsinki Region.

As open environments for development, learning and interaction, development platforms reinforce strategically important areas of expertise and competitiveness in the Helsinki Region. Designing, implementing and developing such platforms is an excellent objective for the common business development policy of the cities.

4.1. DEVELOPMENT PLATFORMS AT THE CORE OF FUTURE CLUSTER BUILDING

Helsinki Region seeks to become an internationally interesting and commercially competitive, versatile development platform based on cutting-edge expertise with a unique competence profile. This platform will foster the development and exploitation of innovative products, services and operating formats. By combining the powerful expertise clusters of the Region, these world class development platforms may

Development platform:



also increase the appeal of the Helsinki Metropolitan Area to foreign investors.

The Helsinki Metropolitan Area must build its future competitive edge not only on its own areas of expertise, but also on the strengths of Finland as

a whole. The Helsinki Region has both a unique opportunity and a national duty to evolve into an international attractive innovation environment that will ensure that the entire expertise portfolio of Finland is displayed and marketed.

“The Pasila cluster project reinforces the status and reputation of Helsinki as an international centre for innovation and expertise.”

Mikael Jungner, Managing Director of the Finnish Broadcasting Company – YLE

■ **Action proposal 8:** The cities should convene a high level enterprise-led steering group to direct the further evolution of existing development platforms and collaboration between them, to supervise implementation of projects at the planning stage, and to design entirely new platforms for the Helsinki Region.

The development platform is still a fairly new and therefore little known operating format. Open and interactive follow-up work will be needed to confirm the common objectives, functions and evolutionary requirements of development platforms both in the Helsinki Metropolitan Area and nationally. Mutual synergy and interaction between various areas of expertise and development platforms must also be enhanced by combining projects into dynamic packages using the structures that have arisen in the work of centres of expertise.

National funding of research and innovation must allow for the evolutionary needs and prospects of the Helsinki Metropolitan Area as a nationally and internationally important development platform environment. The conventional format for project financing will be unsuitable when establishing and maintaining development platforms in practice.

Example: Development environment for digital content and services

A cluster project for digital content and services is being set up in the Pasila district of Helsinki. This could become the next leading project for the Helsinki Metropolitan Area and the whole of Finland, enabling Finnish and foreign business of varying size, research and higher education institutes and end users to work together developing multi-channel content services based on the latest technology for a global market. The success of this major undertaking will require all of the parties involved to display total commitment to the common objectives.

The role of the City of Helsinki in the project will be pivotal. A “second city centre” could arise in Pasila, construction of which would afford an opportunity to create entirely new kinds of environment for work and leisure time. This would require an innovative approach to such aspects as city planning. Private business investment in the area could create several thousand new jobs. The Pasila project is also linked to the national Digital Media Service Innovations – DIMES project, for which it represents the portion planned for the Helsinki Region.

Example: Living labs

Some living labs or pilot communities are already operating in the Helsinki Region, and their status as future environments or “real life laboratories” for research, development and learning has yet to be confirmed. Collaboration between various living labs should also be increased. Noteworthy examples of current living labs include Helsinki Virtual Village in the city’s Arabi-anranta district (part of the European Union IntelCities programme seeking to reinforce the information society), the joint New media culture centre of M-Cult and HIIT, and the Maunula project focusing on local community development.

Future living labs in the Helsinki Region include the Suurpelto initiative in Espoo, the Kolmiosairaala hospital project in the Meilahti district of Helsinki, and the Well Life Center in Espoo co-ordinated by Laurea polytechnic, which forms a living lab in combination with the senior citizens’ centre in the Kustaankartano district of Helsinki. The cluster project for digital content and services in Pasila also includes a living lab.

■ **Action proposal 9:** A national Living Lab Finland Forum should be established to serve as an open idea platform and co-ordinating body between all of the various living labs in Finland.

The Dimes association – Digital Media Service Innovations Finland

Dimes is an association founded by Nokia, TietoEnator, TeliaSonera, Elisa, Finnet and the Finnish Broadcasting Company – YLE to promote the conversion of Finnish technological expertise into services and successful business operations combining expertise in the Oulu, Tampere and Helsinki regions.

“Dimes offers a way of finding, developing and testing service innovations. We are constantly on the lookout for signs of market upheaval and focusing development projects on exploiting the opportunities that these provide. Broadly based collaboration ensures that due consideration is given to regional strengths and our sights remain focused on international competitiveness,” explains Dr Yrjö Neuvo, Senior Vice President and Technology Advisor, Nokia Plc.

5.

Reform and innovations in public services

Expertise, learning and innovativity have become key themes in the competitiveness of cities and their environs. People and businesses are testing the limits of future opportunities. There are many ways for cities to promote skills-based competitiveness through innovative activity both directly and indirectly. This only requires a common purpose and effective instruments and ways of working. Innovative activity must become as natural for a city in maintaining and reinforcing competitiveness as research and development have become for technology businesses.

As national financiers of innovative activity, the Finnish Technology Agency – Tekes and the Finnish National Fund for Research and Development – SITRA have urged the cities of the Helsinki Region to join forces and prepare development projects of considerable influence based on the developmental needs of the public sector. The volume of social and health care services generated in the Helsinki Region will enable implementation of very joint large projects if the cities can find a common purpose and the ability to contribute towards the costs of development work.

The FinnWell health care technology programme of Tekes, for example, will distribute a total of EUR 150 million between 2004 and 2009 for joint projects to improve the quality and productivity of health care provision. FinnWell is not the only national or European programme of this kind. The Helsinki and Uusimaa Hospital District – HUS became one of the first to use FinnWell finance when launching the trauma hospital concept – a specialised health care development project.

5.1. INNOVATIVE ACTIVITY CALLS FOR STRUCTURAL REFORMS

Mainstreaming of innovative activity in all city operating sectors represents a major challenge for policymaking and resource allocation. This policymaking will require interdisciplinary flexibility and the capacity to take risks. Sustained and adequate support for innovation projects will in turn require financial and human investment by the cities. The necessary funding and operating will have to be independent of the output of basic welfare services. The Helsinki Metropolitan Area will achieve impressive results in inno-



vative work only if the cities and other participants in the innovative setting are willing to work closely together. This collaboration must include planning and implementing development projects and measuring their results.

■ **Action proposal 10:** The cities should work together to develop funding and operating formats that will enable innovative activity within the public sector.

5.2. A NEW, ACTIVE ROLE FOR THE CITIES

Even in the Helsinki Metropolitan Area the city authorities have played an important role in establishing the basic infrastructure for business and innovative activity. These general conditions range from city planning to transport connections and a wide variety of services such as basic education and business incubators.

The innovation strategy includes a new, more active role for the cities in innovative activity as such. This means (1) closer integration of public services with the creation of new knowledge and expertise and with the innovative setting, (2) active utilisation of new product and methodological innovations in the operations of the public sector, and (3) the availability of public service provision to product and service development work at enterprises. The public sector may thereby be involved in many ways in creating and utilising social, product and service, and system innovations.

Innovative activity calls for patience and the capacity to take risks. It typically involves long-term investment in the future. A slow rate of return is a fundamental feature of major system innovations arising through collaboration between many participants and disciplines. Their typical time span from the ini-

tial idea and development work to experimentation and final commissioning of an innovation is closer to a decade than to five years. The initial stages will have to ensure, however, that more rapid results are also achieved in public sector innovation projects. Results that have been secured then provide the best justification for expanding and enlarging this work.

The cities must forge a closer alliance with the universities and polytechnics in innovation activities. The latest research findings can be harnessed for developing various sectors by commissioning carefully planned and guided student theses. Collaboration with higher education can also become a more significant recruitment channel for the cities. The polytechnics owned by the cities could play a highly important role in the light of their considerable experience of co-operation with working life and joint development projects.

Innovation work is largely based on intellectual capital, which calls for continued recruitment of suitable staff by the cities. In any case it is clear that an increased rate of retirement will create very many vacancies in the public sector over the next decade. This will enable operational and staff restructuring in a direction favouring innovative activity.

■ **Action proposal 11:** The cities should pay more systematic attention in their future personnel policies to the need for innovative activity and formulate their staffing strategies to foster an organisational culture that encourages innovativity.

5.3. THE PUBLIC SECTOR AS A BENEFICIARY OF INNOVATIONS

The volume of local authority service provision in the Helsinki Metropolitan Area far outweighs that of any other urban region of Finland. The cities of the Region

may therefore become an important test market when utilising new and innovative solutions. One noteworthy example of this is use of the opportunities afforded by the information society to improve the functions of city authorities. When procuring new systems or hardware the cities should investigate the benefits of scale that collaboration could bring. By opening up their service provision to development work by businesses the cities will be able, as users and customers, to influence the kind of innovations that will be offered to them in future.

■ **Action proposal 12:** The cities should work together to improve their procurement operations in order to find a format enabling joint projects of users, producers and research.

An example of collaboration: services for senior citizens

All of the local authorities of the Helsinki Region have launched social services development projects focusing on work with elderly persons: examples include the senior citizens' centre in the Kustaankartano dis-

“While improving the quality and productivity of services is essential for maintaining public welfare services, it also opens up important new business opportunities.”

*Director-General
Veli-Pekka Saarnivaara,
Finnish Technology Agency – Tekes.*

district of Helsinki / Centre for innovation and expertise in senior citizen care, The Well Life Centre for welfare technology development in Espoo and the Pakkala welfare centre in Vantaa. In addition to, and partly with reference to these, a joint Innovations in Practice project of the cities has begun at the Centre of Expertise for Medical and Welfare Technologies, the next stage of which, known as Cluster in Motion, was appointed national centre of expertise programme project of the year for 2005. It is important for the division of labour and collaboration opportunities of these projects to be investigated and for these to be implemented through collaboration that yields added value. Innovation projects in services for senior citizens could serve as an example for other operating sectors.

■ **Action proposal 13:** The numerous senior citizen services development projects of the cities in the Region should be integrated into a single programme subject to common objectives.

5.4. THE CITIES AS ENABLERS OF INNOVATION ACTIVITY

The role of the cities as part of the innovation setting could be that of active participants or of creators of conditions for innovative activity. Both of these roles are important and they also overlap to some extent: for example, the city may first create conditions by land use planning and general infrastructure construction, but subsequently serve as an active participant and developer in the new innovative environment.

In other Finnish growth centres city authorities have performed important functions such as property development for the innovation setting (e.g. technology centres). Fortunately there is no need for this in the

“The cities of the Helsinki Region would do well to develop their services for senior citizens in a co-ordinated manner through collaboration.”

Juha Metso, Director of Social Services and Welfare, City of Espoo

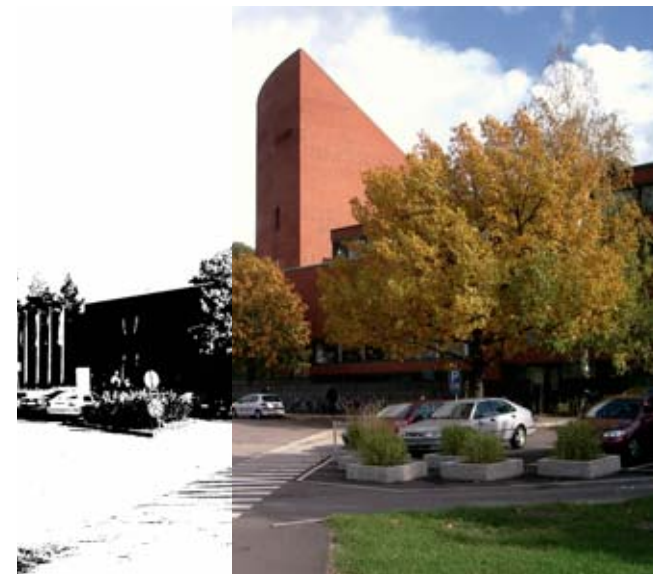
Helsinki Metropolitan Area. However, the cities of the Helsinki Region must invest in future competitiveness by participating in innovation projects. In practice this may, for example, mean establishing, maintaining and developing various development settings.

Example: The “R&D hospital” of the Helsinki and Uusimaa Hospital District – HUS

The Helsinki and Uusimaa Hospital District – HUS is a specialist medical care cluster of international proportions housing the finest medical expertise in Finland. Developing new ways of working and, for example, enterprise collaboration in R&D, have not historically been matters of prime importance in the organisation of public health care services. However, there have been some examples in Finland of commercially successful international product innovations that were developed in association with hospital physicians in earlier decades.

An R&D unit planned for HUS and the Kolmi-osairaala hospital project in the Meilahti district of Helsinki could achieve significant status when joint projects are realised in future between health care centres, multidisciplinary research and enterprises seeking to improve hospital operations or create innovative new products.

■ **Action proposal 14:** A new R&D unit should form part of the development of HUS and the Meilahti region. The owners of HUS should also approach national sources (the Finnish National Fund for Research and Development – SITRA, the National Research and Development Centre for Welfare and Health – Stakes, the Finnish Technology Agency – Tekes) and partner enterprises with a view to securing funding for preparing and implementing the project.





6.

Support for innovative activity

It is worthwhile investing in the innovative setting, as a unique operating format and innovation platform based on collaboration and leading expertise will give the Helsinki Metropolitan Area a permanent competitive edge that is difficult to emulate. Transferring production or a research unit to the other side of the world, for example for cost reasons, is part of normal operations for major international corporations nowadays. It is a lot more difficult to set up a highly tuned developer network or an entire cluster in a new location.

6.1. INNOVATION SERVICES IN UNIVERSITIES, POLYTECHNICS AND RESEARCH INSTITUTES

Important innovations most often arise in the course of research or business operations. Universities, research institutes and in future also polytechnics will play a pivotal role in unearthing embryonic innovations and in refining them with a view to commercialisation. The University of Helsinki, the Finnish National Fund for Research and Development – SITRA, the Technical Research Centre of Finland – VTT and Helsinki University of Technology jointly established the technology transfer company Licentia Ltd for this purpose, and several service units have likewise been set up at universities and polytechnics. Successful technology transfer is the sum total of several major

accomplishments. Finland has few professionals with the experience of intellectual property rights and international business or sufficiently profound industry expertise that are necessary to carry through the commercialisation of new technology.

■ **Action proposal 15:** Universities, polytechnics and research institutes should work together to ensure that a high standard of innovation and new business development services are jointly provided wherever possible.

Some well-esteemed concepts for technology transfer and technology centre operation have been developed in the Helsinki Region and elsewhere in Finland. However, the challenge remains of a general lack of ability to transform innovation potential into business operations. The evaluation and refinement of new ideas and the service package comprising technology transfer and technology centre services should be reviewed as a whole.

For example, new bio-sector enterprises were established in Finland too quickly from the point of view of commercial operation. Within the universities and research centres there is cause to consider setting up innovation platforms upon which the refinement value

of research-based innovations can be increased to the level required for successful commercialisation. This is equally true of technology transfer and start-up operations. National funding will be needed for establishing and maintaining new platforms of this kind. Local participants (universities, research institutes, technology transfer companies and technology centres) would be responsible for implementation.

■ **Action proposal 16:** An investigation should be made of the prospects for establishing new types of “innovation platforms” at universities and research institutes to increase the refinement value of embryonic ideas before embarking on commercialisation measures proper.

6.2. TECHNOLOGY CENTRES AS EXPERTISE EXCHANGES

Technology centres or science parks, the first of which in the Helsinki Metropolitan Area was established at Otaniemi in 1984, share similar objectives to the development platforms discussed in chapter 4. The technology centres are exchange organisations that operate at the interface between science and the users of expertise.



■ **Action proposal 17:** An investigation should be made of how exploitation of the uncommercialised ideas of innovative enterprises operating in the region could be supported, for example through special arrangements to assist the establishment of spin-offs.

The technology centres have been located in the immediate vicinity of universities in Finland in order to support commercialisation of research-based expertise, particularly by creating new start-up enterprises. Development platforms, on the other hand, are typically joint ventures that arise from the market-oriented needs of enterprises, where the geographical location of operations is often of secondary significance.

The aim in both innovative settings, however, is commercial exploitation of new knowledge and expertise.

Example: Otaniemi technology cluster

Helsinki University of Technology, the Technical Research Centre of Finland – VTT and other research institutes operating in the Otaniemi area together comprise the most important technology cluster in the Nordic countries. The challenge of the future is to increase the visibility of the area as an enterprise concentration as well. Otaniemi still has no strong and coherent profile, nor do the operators in the area yet possess a common vision of their objectives. The new Otaniemi development company has an important co-ordinating role in building a sense of community and an international profile for the area and defining its common vision. This will require the enthusiastic support of all of the operators in the Otaniemi area and of Espoo City Council.

Technopolis Ventures Ltd, a subsidiary of the publicly listed property company Technopolis Plc, is Fin-

land's largest business incubator serving technology and expertise-based enterprises. Its service package combines premises, business and individual services and development services and programmes for enterprises. The programme services of Technopolis Ventures at Otaniemi fall into three baskets: (1) business idea assessment and enterprise establishment, (2) business incubator services, and (3) cluster programmes. In December 2004 Technopolis Ventures was awarded the European Union Excellence in Technology Transfer prize in recognition of developing best practices and good co-operation for exploiting these effectively in the various regions of Europe.

Example: Aviapolis Airport City

An important enterprise and expertise cluster has grown up in the vicinity of Helsinki-Vantaa international airport, and is now known as Aviapolis airport city. Some 10,000 new jobs have been created in the area over the last five years. An enterprise-driven strategy was selected for the local technology centre owned by Technopolis Plc: businesses are encouraged



to set up in the area if it is believed that they will also attract research and education. The technology centre already houses the Espoo-Vantaa Polytechnic EVTEK and the Electria training and testing plant for electronics manufacturing that it co-ordinates. Electria is a fascinating encounter point for vocational and academic training, scientific research (Helsinki University of Technology, Tampere University of Technology) and the R&D needs of enterprises.

The presence of a busy international airport is of considerable importance for regional competitiveness. Some ten million passengers pass through Helsinki-



Vantaa international airport each year. Particularly on account of its excellent connections to the Far East, the Helsinki Region is well placed to reinforce its position as a gateway in northern Europe. One desirable objective is for more airline passengers to have business reasons for regarding the Helsinki Region as more than a mere gateway in future.

The Hitech programme that seeks to reinforce business conditions in the City of Vantaa covers five areas: logistics, electronics, the environment, welfare and data communications. Alongside the Hitech programme, Aviapolis also accommodates the Centre of Expertise for Logistics, which is part of the national centre of expertise programme. The principal joint projects of the Centre of Expertise for Logistics and the Centre of Expertise for Active Materials and Microsystems include the logistics RFID Lab, which seeks to exploit the opportunities provided by radio-frequency identification technology in meeting the logistics needs of enterprises.

Example: The science campuses of the University of Helsinki

The territory of the University (and City) of Helsinki accommodates Helsinki Business and Science Park Ltd, a bio-sector-dedicated technology centre established in 1992 in the Viikki district of the city. Establishment of technology centre operations has been hampered by the major capital requirements that are involved in the selected business specialism and by risks that have partially materialised. An increase in collaboration between major corporations, financiers and enterprise developers could improve technology centre operations on this University of Helsinki campus. Helsinki Business and Science Park could also play a pivotal role in realising the third function of the university in exerting societal influence.

Firm commitment will be required of the owners of Helsinki Business and Science Park in order to ensure that technology centre operations gain further coverage and influence on the university's Viikki, Meilahti and Kumpula campuses. Influence can only be achieved through value added services of a high standard. Providing these will require adequate material and intellectual resources. There is cause for further collaboration between the technology transfer company Licentia Ltd and the Technopolis Ventures Ltd.

■ **Action proposal 18:** The owners of Helsinki Business and Science Park Ltd should allocate to the company the additional resources that are necessary for increasing the breadth and influence of operations to the level required to realise the third function of the university effectively.

6.3. A BUSINESS CENTRE FOR CREATIVE SECTORS IN ARABIANRANTA

The traditional technology centre concept is generally linked to "hard" science and technology. However, Helsinki Region also possesses fine expertise and growth potential in sectors that are not so strongly

*"Efficiency alone is not enough
to develop a city
– you also need creativity."*

*Industrial Counsellor
Kristen Ahlström*



technology-based. Practically all of Finland's business potential in creative sectors is located in the Helsinki Metropolitan Area. More efficient dissemination and commercial exploitation of creative expertise is an opportunity for the Helsinki Metropolitan Area. The creative sectors likewise deserve more attention and support in regional business development policy.

■ **Action proposal 19:** A limited company consistent with the technology centre format (Tekel-capable), and serving business expertise in creative sectors and new enterprises, should be established in the Arabi-anranta district of Helsinki by combining the area's currently decentralised functions (centre of expertise, business incubator, innovation services etc.) and particularly by reinforcing business expertise.

6.4. STRENGTHENING SERVICE BUSINESS EXPERTISE

As is typical for an advanced information society, four-fifths of all jobs in the Helsinki Region are in services. Particularly in certain knowledge-intensive sectors such as finance and consulting, the Helsinki Region accounts for well over half of the country's overall volume. On the other hand, the service sector in Finland and even in the Helsinki Region remains underdeveloped in many respects and productivity has fallen in the weakest sub-sectors in recent years.

In future service business operations will become the core business of many enterprises that previously focused on products. Finland needs more practical R&D in service business operations. This will enable services to become an important new source of export operations for Finland in future years. It would be natural for the Helsinki Region to focus on developing internationally replicable service solutions sup-

ported by digital (or ICT) technologies, as this is an area in which the service business expertise of the universities and polytechnics and the technologies developed in research and business activities can be readily exploited.

Example: schools of economics and business administration as expertise intermediates

The schools of economics and business administration must be activated regionally as part of the process of realising the third function of the universities. With its business incubator and other services for start-up enterprises, the business campus envisaged by Helsinki School of Economics and Business Administration in the Mechelininkatu precinct must become an integral part of the (growth) business support network of the Helsinki Region. One interesting initiative has been the business expertise education package implemented with support from the Academy of Finland by Hanken, the Swedish School of Economics and Business Administration, for postgraduate students at the bio-sciences doctoral training school at Viikki.

■ **Action proposal 20:** A cluster programme focusing on services to knowledge-intensive business operations should be established in accordance with the centre of expertise format.

6.5. TOWARDS A DYNAMIC CAMPUS NETWORK

The principal function of a technology centre is to disseminate research-based expertise for the benefit of society as a whole. Pressure to improve work in this area will increase when the provisions of the new Universities Act regarding the third function of higher education (societal influence) take effect in au-



tumn 2005. Businesses are also likely to take a growing interest in collaborating with the universities. The physical proximity of the university campus provided by technology centres and their role as intermediates in relation to business operations will also tend to support collaboration of this kind.

■ **Action proposal 21:** Interdisciplinary and inter-campus regional mobility of students and researchers should be reinforced in the Helsinki Region Science Park area in order to realise important innovations. Enhancement of mobility should begin with the establishment of a “Science Bus Line” uniting the campuses.

6.6. SUPPORT FOR GROWTH ENTREPRENEURSHIP

Growth enterprises are crucial for the competitiveness and economic success of Finland and the Helsinki Region. Despite the country’s high level of R&D investment, however, there is rather little growth-oriented and growth-seeking entrepreneurship exploiting new business opportunities in Finland. Although growth enterprises are a small fraction of all new businesses, they generate most of the new jobs that emerge in this area. The lack of new growth enterprises is particularly marked in the Helsinki Region, which represents about half of the innovation flow in the country as a whole. Reinforcing support for growth enterprises must become a prime objective of the innovation and business policy of the cities. It would also be sensible to allocate more public subsidy measures to growth entrepreneurship specifically in the Helsinki Metropolitan Area, as it is likely that the best return on investment can be secured in this part of the country.

A new company is often the most effective way to commercialise expertise and innovations. Even in Finland, however, this still requires an entrepreneur, who increasingly needs to be highly educated. For entrepreneurship to become a competitive career choice for the highly educated, amendments to the taxation system would be required, coupled with increased public venture capital financing at the start-up phase. Some measures could also be taken regionally, for example by investing selectively in regionally dedicated seed capital funds.

Particularly in many technology-based sectors, early globalisation is a requirement for growth. It is vitally important for the exploitation of Finland’s innovation potential to turn the Helsinki Region into a functional growth platform for internationally successful new businesses.

The country needs one region where conditions are favourable for accommodating and accelerating the progress of globally operating growth enterprises, regardless of whether these businesses are originally from Finland or abroad.

■ **Action proposal 22:** The international profile of the Helsinki Region as a high standard growth environment should be improved by networking support functions and sources of start-up finance more effectively internationally and by systematically marketing the business and innovation setting offered by the Region.

Besides familiar challenges regarding the innovative setting, the principle requirements for the progress of growth companies are known to be closely associated with business expertise and the availability of finance. The Helsinki Region has to lead the way in developing its own local operating formats that benefit from and supplement the national systems for enhancing both business development and funding. These measures must be implemented as part of the common innovation policy of the cities in the Region. The role of the technology centres as providers of services for growth-oriented businesses must be further reinforced.

■ **Action proposal 23:** An independent assessment should be commissioned of business development organisations and early stage venture capital funds in the Region and growth enterprise services should be distinguished as an entity that is separate from basic business incubator and advisory services.

6.7. START-UP FINANCING OF INNOVATIVE ENTERPRISES

A quantitatively and qualitatively adequate flow of internationally competitive projects is a condition of an effective financing market for risk capital. The Helsinki Region is the only urban area in Finland that provides a sufficient number of new projects each year to attract the interest of regional capital investment operators. To harness innovation potential, growth-seeking must be encouraged in new projects and the standard of services that are allocated to these projects must be improved. This will enhance conditions for the emergence of internationally successful growth enterprises and for their attachment to the Helsinki Region.

■ **Action proposal 24:** The cities should be prepared to continue their involvement as investors in current and/or future seed capital funds. Particular attention should be paid to the business expertise of investment managers at fund management teams when considering new investments.

Universities, polytechnics and research institutes must also seriously consider taking part in start-up enterprise operations, for example by assigning intellectual property rights to new businesses or through focused fund investments. Fund investments will be justified for universities and research institutes only if they are associated with close collaboration with the investor, for example in evaluating project flows.

The Helsinki Region must actively utilise national financing instruments for start-up companies. This calls for improved information and co-operation between network participants. When viewed in terms of the potential of various regions, for example, about half of the volume of establishment loans from the National Technology Agency of Finland – Tekes, of the Industrial Investment seed financing programme, and of any national seed capital injection fund that is set up should be allocated to the Helsinki Metropolitan Area. This would be achieved by improving collaboration between the parties that refine projects in the initial stages and sources of finance, for example by arranging introductory meetings and innovation clinics.

■ **Action proposal 25:** A Round Table of private and public start-up financiers operating in the Helsinki Region should be set up to co-ordinate co-operation and international projects.



7.

An excellent place to live, study and work

7.1. THE IMPORTANCE OF CREATIVE SETTINGS

In order to attract and keep creative talents, the Helsinki Region will have to provide creative settings offering high standards in housing, work and leisure opportunities. The Helsinki Metropolitan Area is well placed to develop all three of these comfort sectors. This will also require increasing co-operation between the cities: the present centres of expertise of the Region provide a good foundation for perceiving and reinforcing the expertise-based profiles of the various areas and cities.

A varied and high standard of cultural provision increases the appeal of the Region. With its art galleries, opera house and concert halls, the downtown area of Helsinki is a world-class setting. The entire Helsinki Metropolitan Area must invest in diversified, pluralistic and increasingly international cultural provision so that foreigners will also come to appreciate that the Region provides a satisfying living environment.

International influences and co-operation are likewise important in city planning. For example changes in land use are occurring for reasons of historical progress that will be very similar to people from

many other European cities. These changes arise, for example, when old docklands and industrial estates are converted for residential and other use. The redevelopment of such areas can benefit from international experiences, for example by using international teams of experts to stimulate debate and provide new ideas.

Planning in the Helsinki Region should seek to be innovative, and to bring genuine new content to urban residence, work and recreation, as occurred in Tapiola Garden City in the 1950s and at the Old Cable Factory in the 1990s.

■ **Action proposal 26:** An international team of experts should be appointed to formulate ideas regarding the future of the Helsinki Region, particularly through assignments supporting innovative city planning.

7.2. INTERNATIONAL SCHOOLS

International schools have an important function in attracting foreign experts and ensuring that they thrive in the Region. The cities of the Helsinki Metropol-

itan Area should jointly prepare for an imminent increase in the number of foreign residents by compiling a joint networking strategy for international schools that forecasts the needs of a growing foreign community.

“A high standard, comprehensive network of international schools and universities is a prime requirement for foreign experts to be able to thrive in the Helsinki Region.”

*Erkki Ormala,
Vice-President, Nokia Plc*

8.

Cluster development in the Helsinki Region

Predicting or forecasting future success clusters formed no part of the process of formulating the innovation strategy. The National Technology Agency of Finland – Tekes is preparing a national technology strategy, which is due for completion in winter 2005. A process should be launched in the Helsinki Region preparing for the first time to make choices with respect to establishing the status of clusters that are most important for the future of the Region as part of the joint business policy of the cities.

8.1. THE FUTURE OF CENTRE OF EXPERTISE OPERATIONS

In autumn 2005 Culminatum Ltd began the process of preparing for the period following the end of the current centre of expertise term at the end of 2006. This preparation will create an impression of the productivity of the centre of expertise programme to date and a provisional proposal outlining a corresponding programme to highlight new sectors.

The national centre of expertise programme launched in 1995 focused on developing new business sectors in the Uusimaa Region. A second pro-

gramme term began in 1999. The centre of expertise programme was reviewed in 2002 and some new centres of expertise and sectors were added. The centre of expertise programme for Uusimaa now includes six areas of expertise, two of which are administered by Culminatum itself.

One major issue to be resolved nationally is that of whether operations of the kind undertaken at centres of expertise should continue on the current principle of supporting new areas or whether future attention should also be focused on developing existing strong clusters (in the forest, engineering and ICT sectors). Culminatum supports efforts to reinforce the link between centre of expertise operations and other contents of national innovation policy.

Areas of expertise and responsible organisations of the Uusimaa Centre of Expertise:

- *Active Materials and Microsystems, Technopolis Ventures Oy*
- *Digital Media, Content Production and Learning Services, Culminatum Ltd Oy*
- *Gene Technology and Molecular Biology, Helsinki Business and Science Park Ltd Oy*
- *Logistics, Technopolis Plc, Vantaa*
- *Medical and Welfare Technologies, Culminatum Ltd Oy*
- *Software Product Business, Technopolis Ventures Oy*

9.

From strategy to implementation

The innovation strategy for Helsinki Region includes action proposals that should be specified and for which concrete measurable objectives are required. Most of the proposals may in principle be implemented quickly. On the other hand, nothing will happen without the necessary decisions by implementing organisations, the most important of which are the cities, universities and polytechnics of the Region. The cities have a common advisory board and the universities and polytechnics have a joint Rectors' Forum.

Preparation and initiation of measures will also require the leadership of a network of participants. Research indicates that lack of leadership is one of the main problems of regional development operations. Successful performance of each action proposal in the innovation strategy will require one of the participants to assume responsibility for leading the project, i.e. for making the change happen.

Many of the proposals in the strategy will require co-operation across organisational and local authority boundaries, and this will not occur without active further preparation. As far as the cities are concerned, this preparatory function may be assigned quite naturally to the core group that was appointed in autumn 2004 to prepare the common business policy for the Helsinki Metropolitan Area, and also in some

respects directly to sector participants. For the universities and polytechnics, securing the commitment of upper echelons to the common objectives is a matter for the joint forum of university and polytechnic rectors in the Region.

Culminatum Ltd is prepared to assume responsibility for co-ordinating implementation of the innovation strategy and for monitoring and reporting the outcome of measures taken.

This regional innovation strategy for the Helsinki Region is the first of its kind. The spread of innovative activity to new areas opens up entirely new vistas, which will in turn impose pressures to update the innovation strategy. The first strategy formulation that has now concluded demonstrated its necessity by giving rise to a great deal of interdisciplinary and interdepartmental interaction, the fruits of which lie beyond the scope of this report.



List of action proposals

1. IMPROVING THE INTERNATIONAL APPEAL OF RESEARCH AND EXPERTISE

Action proposal 1: The universities, polytechnics and local authorities should make joint efforts to market the Helsinki Region internationally as an integrated region for education and research.

Action proposal 2: The universities and polytechnics should commit themselves to common internal globalisation objectives and principles, and should formulate the necessary plans for enhancing international student recruitment.

Action proposal 3: The universities and polytechnics will select the educational areas that will be provided in future in the English language. Universities must collaborate in planning and implementing degree courses. The same need for collaboration also applies to the polytechnics and to the degrees that they grant.

Action proposal 4: The Helsinki School of Creative Entrepreneurship project should be launched, providing an English language degree programme and participation in multidisciplinary research projects. HSCE will provide substantial support to the participating universities in performing their third function of exerting social influence.

Action proposal 5: Foreign students and researchers should be better served in future. This may be achieved by establishing a unit to serve foreigners throughout the Region and to take charge of at least marketing, studies, housing, residence permits, social welfare, the status of family members and recruitment.

Action proposal 6: The cities of the Helsinki Metropolitan Area must be prepared to assist in financing annual invitations to a few world-class researchers to work at the universities and research institutes of the Region in order to reinforce the international character of these centres. This will at least require special arrangements for recruitment and housing. The cities should formulate a concrete proposal on this matter that will serve to focus the interest of other potential sources of finance.

Action proposal 7: Universities, polytechnics and businesses must jointly endeavour to support career opportunities in the Helsinki Metropolitan Area for foreign students completing their degrees. This means considering foreigners for internships, bench training and other opportunities when these are advertised and planned.

2. REINFORCING EXPERTISE CLUSTERS AND CREATING COMMON DEVELOPMENT PLATFORMS

Action proposal 8: The cities should convene a high level enterprise-led steering group to direct the further evolution of existing development platforms and collaboration between them, to supervise implementation of projects at the planning stage, and to design entirely new platforms for the Helsinki Region.

Action proposal 9: A national Living Lab Finland Forum should be established to serve as an open idea platform and co-ordinating body between all of the various living labs in Finland.

3. REFORM AND INNOVATIONS IN PUBLIC SERVICES

Action proposal 10: The cities should work together to develop funding and operating formats that will enable innovative activity.

Action proposal 11: The cities should pay more systematic attention in their future personnel policies to the need for innovative activity and formulate their staffing strategies to foster an organisational culture that encourages innovativity.

Action proposal 12: The cities should work together to improve their procurement operations in order to

find a format enabling joint projects of users, producers and research.

Action proposal 13: The numerous senior citizen services development projects of the cities in the Region should be integrated into a single programme subject to common objectives.

Action proposal 14: A new R&D unit should form part of the development of HUS and the Meilahti region. The owners of HUS should also approach national sources (the Finnish National Fund for Research and Development – SITRA, the National Research and Development Centre for Welfare and Health – Stakes, the Finnish Technology Agency – Tekes) and partner enterprises with a view to securing funding for preparing and implementing the project.

4. SUPPORT FOR INNOVATIVE ACTIVITY

Action proposal 15: Universities, polytechnics and research institutes should work together to ensure that a high standard of innovation and new business development services are jointly provided wherever possible.

Action proposal 16: An investigation should be made of the prospects for establishing new types of “innovation platforms” at universities and research institutes to increase the refinement value of embryonic ideas before embarking on commercialisation measures proper.

Action proposal 17: An investigation should be made of how exploitation of the uncommercialised ideas of innovative businesses operating in the region could be supported, for example through special arrangements to assist the establishment of spin-offs.

Action proposal 18: The owners of Helsinki Business and Science Park Oy should allocate to the company

the additional resources that are necessary for increasing the breadth and influence of operations to the level required to realise the third function of the university effectively.

Action proposal 19: A limited company consistent with the technology centre format (Tekel-capable), and serving business expertise in creative sectors and new enterprises, should be established in the Arabianranta district of Helsinki by combining the area’s currently decentralised functions (centre of expertise, business incubator, innovation services etc.) and particularly by reinforcing business expertise.

Action proposal 20: A cluster programme focusing on services to knowledge-intensive business operations should be established in accordance with the centre of expertise format.

Action proposal 21: Interdisciplinary and inter-campus regional mobility of students and researchers should be reinforced in the Helsinki Region Science Park area in order to realise important innovations. Enhancement of mobility should begin with the establishment of a “Science Line” uniting the campuses. **Action proposal 22:** The international profile of the Helsinki Region as a high standard growth environment should be improved by networking support functions and sources of start-up finance more effectively internationally and by systematically marketing the business and innovation setting offered by the Region.

Action proposal 23: An independent assessment should be commissioned of business development organisations and start-up capital investment funds in the Region and growth enterprise services should be distinguished as an entity that is separate from basic business incubator and advisory services.

Action proposal 24: The cities should be prepared to continue their involvement as investors in current and/or future seed capital funds. Particular attention should be paid to the business expertise of investment managers at administration companies when investing in funds.

Action proposal 25: A Round Table of private and public start-up capital financiers operating in the Helsinki Region should be set up to co-ordinate co-operation and international projects.

Action proposal 26: An international team of experts should be appointed to formulate ideas regarding the future of the Helsinki Region, particularly through assignments supporting innovative city planning.

Specialist reports pertaining to the process of formulating the innovation strategy:

Developing the Seed Finance Market in the Helsinki Region, Advestia Oy

The technology centre concept in the Helsinki Region: Net Effect Oy

City authorities as promoters of innovative activity: Advansis Oy

Development platforms – a proposal for part of the innovation strategy and a concluding memorandum: Advansis Oy

Universities, polytechnics and businesses in the Helsinki Region – prospects for globalisation at home: Centre for Research on Ethnic Relations and Nationalism, Swedish School of Social Science

All enquiries should be addressed to Culminatium Ltd Oy

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Makarow, Marja: University of Helsinki

Malkavaara, Jarmo: Ministry of Education

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Penate-Medina, Oula: Cancer Targeting Technologies

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Photographs: p. 5 City of Helsinki by Boy Hilden.

pp. 6, 8, 12, 15-17, 19-20 and 24 by Kimmo Rönkä; M.Sc.

p. 7 by VTT photo archive and p. 10 by Technopolis Plc photo archive.

Translation: Daryl Taylor, TK-Teknologi

Layout: Spokesman Oy.

Printed by Salpausselän Kirjapaino Oy, 2005.



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